UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,659	10/26/2001	Glen B. Cook	SP01-302	4629

22928 7590 06/02/2004

CORNING INCORPORATED
SP-TI-3-1
CORNING, NY 14831

EXAMINER
HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/035,659	COOK ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) *4-12 and 32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 13-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, specie 22 in Paper dated 5/7/04 is acknowledged. The traversal is on the ground(s) that the groups are inextricably intertwined and the MPEP provides that a species election is only reasonable when the claims contain more than a reasonable number of species, and because the distinction between B1 and B2, and C1 and C2 is unreasonable. This is not found persuasive because being "inextricably intertwined" is not relevant to whether a restriction is proper, and there is only an allegation a that the inventions are inextricably intertwined. Also, Examiner could find no place in the MPEP which mentions that a species election is reasonable when the claims contain more than a reasonable number of species. Lastly, there is no indication as to why the above mentioned distinctions are unreasonable. If it is Applicant's position that the species are obvious in view of each other, Applicant needs to clearly state such on the record, or supply evidence which shows such.

The requirement is still deemed proper and is therefore made FINAL.

Claims 4-12 and 32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5/7/04.

Claim Objections

The claims are objected to because of the following informalities: various claims have typographical errors. Appropriate correction is required.

Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 1 requires bonding the "bonding surfaces". However, claim 3 seems to require that material is placed between the bonding surfaces. Thus for claim 3, the bonding surfaces are not actually attached, rather

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, and 13-31 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: it is unclear what the bonding surfaces are attaching to – each other? The phrase "lower than softening temperature" is of improper English which makes it unclear as to whether it refers to only one of the softening temperatures, or all the softening temperatures – and even if the glasses must have the same softening temperature(s).

Claim 1, line 7 refers to "softening temperature" it is unclear as to whether each article must have the same softening temperature – and if each article can only have one softening temperature.

Claim 3 requires putting a surface on that bonding surfaces. But if there is another surface is on the bonding surfaces, then the two bonding surfaces can't come into contact. Moreover, as examiner reads the invention, once the hydrophilic surface is applied, the previous (bonding) surfaces no longer exist.

The other claims are indefinite for substantially the same reasons. Except that for claims 14 and 22, there is no antecedent basis for "the softening temperature". Whereas – any glass should have a softening temperature, these claims suggests that the claims require that there is only one softening temperature. Most fiber preforms have at least two softening temperatures – because they have at least two different compositions.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 14-15, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeNoane 4407667 alone or in view of Coucoulas 3860405. (Note: other references are used as evidence as to what is inherent)

LeNoane discloses the invention substantially as claimed (see figure 3 and the associated text). LeNoane does not teach the temperature of bonding. It would have been obvious to perform routine experimentation to determine the optimal temperature.

Using Coucoulas: Col. 8, lines 1-9 is evidence that routine experimentation would result in the best temperature for bonding glass items would be below the softening temperature – because it is the "only" way to get satisfactory results.

Alternatively: it would have been obvious to one of ordinary skill to not to go above the softening temperature, because Coucoulas discloses satisfactory bonding occurs "only if" the temperature is below the softening temperature.

Claim 2 is clearly met.

Claim 3 it is inherent that as one creates the articles/surfaces, that a hydrophilic surface would "rapidly" result. See Glass Science (Doremus), page 213, second paragraph. Applicant identifies the SiOH groups as creating a hydrophilic surface. Alternatively, the surface are hydrophilic prior to absorption of atmospheric water.

Claims 14-15, 22-24 are clearly met.

Claim 13: It is inherent that polished glass can function as a polarizer: see VanNostrand's Scientific Encyclopedia, 6th edition, page 2271, "Polarized Light" entry – first paragraph. It would have been obvious to have the LeNoane effectively polished smoothed- because if there was roughness, air could be trapped, which would likely

cause the fiber to break. As to whether the glasses actually function for a step of polarizing – such is an intended use.

Claims 13-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeNoane 4407667 (or Sterling 4195980) in view of Gwo 6284085. . (Note: other references are used as evidence as to what is inherent)

LeNoane (as well as Sterling) discloses the bonding of glass preforms, but not the temperature limitation. Gwo teaches that one can create a strong room-temperature bond in a manner which is simple and inexpensive. IT would have been obvious to change the LeNoane (or the Sterling) process, by using the improved bonding procedure of Gwo, for the advantages of Gwo. Relevant portions of Gwo include the abstract, col. 1, lines 22-29; from col. 1, line 61 to col. 2, line19; col. 3, lines 37-62; col. 6, lines 42-62.

Claim 16: The RCA cleaning (col. 6, line 57 of Gwo) includes contacting with acid. See Fujii 4963505 claim 6, lines 27-38 as evidence.

Claim 17: it would have been obvious to have a pH greater than 8, because if the Gwo base material (NaOH, etc) isn't above 8, then it would be like using plain water.

Claim 18: see Gwo, col. 3, line 61.

Claim 19 the surfaces will be wet/moist whenever treated with one of the liquids.

Claim 20: Gwo teaches heating after the bonding: for example claims 37-38 of Gwo. It would have been obvious not to heat so as to remove the hydroxide, because Gwo is clear that the hydroxide is desired for the bonding.

Claim 21: it would have been obvious that a covalent bond would occur at least when the preform is heated to draw the fiber.

Claims 22- 31 are met for the reasons mentioned above.

Information Disclosure Statement

The information disclosure statements filed 2 Feb 2004, 6 Nov 2002, and 10/26/01 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The references lined through were incomplete, illegible, or missing a copy of the foreign reference itself.

The information disclosure statement filed 2 Feb 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

The information disclosure statement filed 10/26/01 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information

submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

The complete date of some of the references is missing- it makes it impossible to tell if the references qualify as prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Hoffmann 5-1-04

Primary Examiner
Art Unit 1731

jmh